

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT **OCD Artesia**

FORM APPROVED
OMB No 1004-0135
Expires November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Yates Petroleum Corporation

3a. Address

105 South Fourth Street, Artesia, NM 88210

3b. Phone No (include area code)

(575) 748-1471

4. Location of Well (Footage, Sec., T, R, M, or Survey Description)

*Surface: 990' FNL & 2490' FWL,
BHL: 760' FNL & 2310' FEL,
Section 13, T20S-R29E, Unit Letter (Surface C) Section 14, T20S-29E (BHL B)*

5. Lease Serial No

NM-81929 & NM-55125

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA/Agreement, Name and/or No

N/A

8. Well Name and No.

Z1a AHZ Federal Com 2-H

9. API Well No

10. Field and Pool, or Exploratory Area

Undesignated 2nd Bone Spring

11. County or Parish, State

Eddy, New Mexico

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☒ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Yates Petroleum Corporation respectfully requests permission to change the following:
Please see attached.

**Accepted for record
NMOCD**

*TES
6/15/2012*

RECEIVED
JUN 13 2012
NMOCD ARTESIA

Thank-You,

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Troy Peterson

Title

Signature

[Signature]

Date

Well Planning

June 5, 2012

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

Title

Date

JUN 12 2012

/s/ Chris Walls

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

**BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE**

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

OPERATOR'S COPY

Form 3160-3
(February 2005)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. <i>BHL</i> NM-81929 & NM-55125 <i>SHL</i>	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name N/A	
2. Name of Operator Yates Petroleum Corporation 025575		7. If Unit or CA Agreement, Name and No. N/A	
3a. Address 105 South Fourth Street, Artesia, NM 88210		8. Lease Name and Well No. Zia AHZ Federal Com 2-H	
3b. Phone No. (include area code) 505-748-1471		9. API Well No.	
4. Location of well (Report location clearly and in accordance with any State requirements. *) At proposed prod. zone 990' FNL & 2490' FWL, Section 13-T20S-29E, SHL 760' FNL & 2310' FEL, Section 14-T20S-R29E, BHL		10. Field and Pool, or Exploratory Undesignated 2nd Bone Spring	
11. Sec., T, R, M., or Blk. And Survey or Area Sec. 13-20S-29E SHL & 14-20S-29E BHL		12. County or Parish Eddy	
13. State NM		14. Distance in miles and direction from the nearest town or post office* Approximately 20 miles east of Carlsbad, NM.	
15. Distance from proposed* location to nearest (Also to nearest drlg. unit line, if any) SHL 130' 330' BHL		16. No. of acres in lease NM81929 1169.01 Ac. NM55125 160 Ac.	
17. Spacing Unit dedicated to this well S2N2 Sec. 7-26S-29E & S2NW Sec. 8-26S-29E		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 1200'	
19. Proposed Depth 8379' <i>MTV 11</i> 8254' TVD & 12921' TMD		20. BLM/ BIA Bond No. on file NATIONWIDE BOND #NMB000434	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3325' GL		22. Approximate date work will start* ASAP	
23. Estimated duration 60 days		24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1 shall be attached to this form:

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor.
2. ap
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by existing bond on file (see item 20 above).
5. Operator certification.
6. Such other site specific information and/ or plans as may be required by the BLM |
|--|---|

25. Signature		Name (Printed/ Typed) Cy Cowan	Date 1/4/2012
Title Land Regulatory Agent			
Approved By (Signature)		Name (Printed/ Typed) Jesse J. Juen	Date 5/25/2012
Title STATE DIRECTOR		Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to co operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and wilfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* (Instructions on page 2)

CAPTAN CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

YATES PETROLEUM CORPORATION

Zia AHZ Federal Com #2-H

990' FNL and 2490' FWL, Section 13-20S-29E, Surface Hole Location

760' FNL & 2310' FEL, Section 14-20S-29E, Bottom Hole Location

Eddy County, New Mexico

- The estimated tops of geologic markers are as follows:

Rustler	269'	Bone Spring LM	6209'-Oil
Top of Salt	344'	Avalon Shale	6324'
Base of Salt	1254'	Middle Avalon	6504'-Oil
Tansill	1299'	Lower Avalon	6864'-Oil
Yates	1403'	Bone Spring 1 /SD/	7314'-Oil
Capitan Reef	1864'	Bone Spring 2 /SD/	8185'-Oil
Cherry Canyon	3434'-Oil	Target Sand	8389'-Oil
Brushy Canyon	4644'-Oil	TD Lateral	12921'

- The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 100'
Oil or Gas: See above.

- Pressure Control Equipment: Yate Petroleum Corporation respectfully requests a variance to allow placement of a 2000 PSI annular system with a 17.5" opening to be installed on the 20" casing. The annular will be pressured up to 1000 PSI and held for 30 minute test period. 3000 PSI BOPE with a 13.625" opening will be installed on the 13.3/8" casing and also on the 9 5/8" casing. Pressure tests to 3000 PSI and held for 30 minutes will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

- Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment, and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when Kelly is not in use.

5. THE PROPOSED CASING AND CEMENTING PROGRAM:

A. Casing Program: All new casing to be used

Hole Size	Casing Size	Wt./Ft	Grade	Coupling	Interval	Length
36"	30"		H-40		0-40	40'
26"	20"	94#	H-40	ST&C	0-300'	300'
17 1/2"	13 3/8"	54.5#	J-55	ST&C	0-100'	100'
17 1/2"	13 3/8"	48#	H-40	ST&C	100'-1100'	1000'
17 1/2"	13 3/8"	54.5#	J-55	ST&C	1100'-1500'	400'
12 1/4"	9 5/8"	36#	K-55	LT&C	0-3500'	3500'
8 3/4"	5.1/2"	17#	P-110	LT&C	0'-7900'	7900'
8 1/2"	5 1/2"	17#	P-110	Buttress	7900'-12921'	5021'

Minimum Casing Design Factors: Burst 1.0, Tensile Strength 1.8, Collapse 1.125

B. CEMENTING PROGRAM:

Surface Casing: Lead with 675 sacks Class C with CaCl₂ (Wt. 14.80 Yld 1.34). Designed with 100% excess cement. TOC is surface.

Intermediate Casing: Lead with 900 sacks of 35:65:6PzC (Wt 12.50 Yld 2.00). Tail in with 200 sacks C with CaCl₂ (Wt. 14.80 Yld. 1.34). 100% excess designed. TOC surface.

Intermediate Casing 2: Lead with 970 sacks 35:65:6PzC (Wt. 12.50 Yld. 2.00). Tail in 200 sacks Class C with CaCl₂ (Wt. 14.80 Yld. 1.34) 100% excess designed. TOC surface.

Production Casing: cemented in three stages with stage tools at 8600' and 4000'.

Stage One: Packers and Ports from 12921'-8600'

Packers and Ports to 12921'-8600'

Stage Two: 650 sacks 35:65:6PzC (Wt 12.50 Yld. 2.00). Tail in 200 sacks Pecos Valley Lite (Wt. 13.00 Yld. 1.41) with D112, D151, D174, D177, D800, and D46. TOC 4000'. 30% excess designed.

Stage Three: 256 sacks 35:65:6PzC (Wt. 12.50 Yld 2.00). Tail in 200 sacks Class C with CaCl₂ (Wt. 14.80 Yld 1.34). TOC 1700'. 30% excess designed.

Well will be drilled vertically to 7,901'. Well will then be kicked off at 7,901' and directionally drilled at 12 degrees per 100' with a 8 3/4" hole to 8,666' MD (8,379' TVD). Hole will then be reduced to 8 1/2" and drilled to 12,921' MD (8,254' TVD) where 5 1/2" casing will be ran with packer/port in lateral and cemented from 8600 to 1700' above the Capitan Reef Top. A DV tool will be set at 8,600' and at 4000'. Penetration point of the producing zone will be encountered at 967' FNL & 2002' FWL, Sect. 13, 20S-29E. Deepest TVD in the well will be 8,379' in the lateral.

6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

Interval	Type	Weight	Viscosity	Fluid Loss
0-300'	Fresh Water	8.60-9.20	32-34	N/C
300'-1500'	Brine Water	10.00-10.00	28-29	N/C
1500'-3500'	Fresh Water	8.60-8.80	28-29	N/C
3500'-12921'	Cut Brine (Lateral Section)	8.80-9.20	28-32	<15

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Rig personnel will check mud hourly.

7. EVALUATION PROGRAM:

Samples: 30' samples to 3000'. 10' samples from 3000' to TD. Mudloggers on at surface casing

Logging: Platform Hrla-CMR *See COA*

Coring: None anticipated

DST's: None Anticipated

8. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Maximum Anticipated BHP:

0'-300'	144 PSI
300'-1500'	796 PSI
1500'-3500'	1602 PSI
3500'-8379'	4008 PSI



Yates Petroleum Corp.

Eddy County (NAD 83)
Zia "AHZ" Federal Com
#2H
OH

Plan: Plan #2

PathfinderX & Y Report

06 June, 2012

PATHFINDER®

A Schlumberger Company



Pathfinder PathfinderX & Y Report

PATHFINDER

A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County (NAD 83)	TVD Reference:	KB = 18 @ 3343.0usft (Silver Oak 10)
Site:	Zia "AHZ" Federal Com	MD Reference:	KB = 18 @ 3343.0usft (Silver Oak 10)
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	EDM 5000.1 Single User Db

Project	Eddy County (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Zia "AHZ" Federal Com		
Site Position:		Northing:	574,115.121 usft
From:	Map	Easting:	635,009.532 usft
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 34' 40.544 N
		Longitude:	104° 1' 45.233 W
		Grid Convergence:	0.16 °

Well	#2H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0 0 usft	Wellhead Elevation:	usft
		Latitude:	32° 34' 40.544 N
		Longitude:	104° 1' 45.233 W
		Ground Level:	3,325.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	1/25/2012	7.74
			Dip Angle
			60 45
			Field Strength
			48,757

Design	Plan #2		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			272.79

Survey Tool Program	Date 6/6/2012		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
0.0	12,921.0	Plan #2 (OH)	MWD
			Description
			MWD - Standard



Pathfinder PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Site: Zia "AHZ" Federal Com
Well: #2H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #2H
TVD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
MD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.0	0.00	0.00	0.0	-3,343.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
100.0	0.00	0.00	100.0	-3,243.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
200.0	0.00	0.00	200.0	-3,143.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
300.0	0.00	0.00	300.0	-3,043.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
400.0	0.00	0.00	400.0	-2,943.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
500.0	0.00	0.00	500.0	-2,843.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
600.0	0.00	0.00	600.0	-2,743.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
700.0	0.00	0.00	700.0	-2,643.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
800.0	0.00	0.00	800.0	-2,543.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
900.0	0.00	0.00	900.0	-2,443.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,000.0	0.00	0.00	1,000.0	-2,343.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,100.0	0.00	0.00	1,100.0	-2,243.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,200.0	0.00	0.00	1,200.0	-2,143.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,300.0	0.00	0.00	1,300.0	-2,043.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,400.0	0.00	0.00	1,400.0	-1,943.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,500.0	0.00	0.00	1,500.0	-1,843.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,600.0	0.00	0.00	1,600.0	-1,743.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,700.0	0.00	0.00	1,700.0	-1,643.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,800.0	0.00	0.00	1,800.0	-1,543.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
1,900.0	0.00	0.00	1,900.0	-1,443.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,000.0	0.00	0.00	2,000.0	-1,343.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,100.0	0.00	0.00	2,100.0	-1,243.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,200.0	0.00	0.00	2,200.0	-1,143.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,300.0	0.00	0.00	2,300.0	-1,043.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,400.0	0.00	0.00	2,400.0	-943.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,500.0	0.00	0.00	2,500.0	-843.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,600.0	0.00	0.00	2,600.0	-743.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53



Pathfinder PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp
Project: Eddy County (NAD 83)
Site: Zia "AHZ" Federal Com
Well: #2H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #2H
TVD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
MD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,700.0	0.00	0.00	2,700.0	-643.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,800.0	0.00	0.00	2,800.0	-543.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
2,900.0	0.00	0.00	2,900.0	-443.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,000.0	0.00	0.00	3,000.0	-343.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,100.0	0.00	0.00	3,100.0	-243.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,200.0	0.00	0.00	3,200.0	-143.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,300.0	0.00	0.00	3,300.0	-43.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,400.0	0.00	0.00	3,400.0	57.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,500.0	0.00	0.00	3,500.0	157.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,600.0	0.00	0.00	3,600.0	257.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,700.0	0.00	0.00	3,700.0	357.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,800.0	0.00	0.00	3,800.0	457.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
3,900.0	0.00	0.00	3,900.0	557.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,000.0	0.00	0.00	4,000.0	657.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,100.0	0.00	0.00	4,100.0	757.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,200.0	0.00	0.00	4,200.0	857.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,300.0	0.00	0.00	4,300.0	957.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,400.0	0.00	0.00	4,400.0	1,057.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,500.0	0.00	0.00	4,500.0	1,157.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,600.0	0.00	0.00	4,600.0	1,257.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,700.0	0.00	0.00	4,700.0	1,357.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,800.0	0.00	0.00	4,800.0	1,457.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
4,900.0	0.00	0.00	4,900.0	1,557.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,000.0	0.00	0.00	5,000.0	1,657.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,100.0	0.00	0.00	5,100.0	1,757.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,200.0	0.00	0.00	5,200.0	1,857.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,300.0	0.00	0.00	5,300.0	1,957.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53



Pathfinder PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Site: Zia "AHZ" Federal Com
Well: #2H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #2H
TVD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
MD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (%)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
5,400.0	0.00	0.00	5,400.0	2,057.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,500.0	0.00	0.00	5,500.0	2,157.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,600.0	0.00	0.00	5,600.0	2,257.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,700.0	0.00	0.00	5,700.0	2,357.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,800.0	0.00	0.00	5,800.0	2,457.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
5,900.0	0.00	0.00	5,900.0	2,557.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,000.0	0.00	0.00	6,000.0	2,657.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,100.0	0.00	0.00	6,100.0	2,757.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,200.0	0.00	0.00	6,200.0	2,857.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,300.0	0.00	0.00	6,300.0	2,957.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,400.0	0.00	0.00	6,400.0	3,057.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,500.0	0.00	0.00	6,500.0	3,157.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,600.0	0.00	0.00	6,600.0	3,257.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,700.0	0.00	0.00	6,700.0	3,357.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,800.0	0.00	0.00	6,800.0	3,457.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
6,900.0	0.00	0.00	6,900.0	3,557.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,000.0	0.00	0.00	7,000.0	3,657.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,100.0	0.00	0.00	7,100.0	3,757.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,200.0	0.00	0.00	7,200.0	3,857.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,300.0	0.00	0.00	7,300.0	3,957.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,400.0	0.00	0.00	7,400.0	4,057.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,500.0	0.00	0.00	7,500.0	4,157.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,600.0	0.00	0.00	7,600.0	4,257.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,700.0	0.00	0.00	7,700.0	4,357.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,800.0	0.00	0.00	7,800.0	4,457.0	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,901.7	0.00	0.00	7,901.7	4,558.7	0.0	0.0	0.0	0.00	574,115.12	635,009.53
7,925.0	2.80	272.79	7,925.0	4,582.0	0.0	-0.6	0.6	12.00	574,115.15	635,008.96



Pathfinder PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Site: Zia "AHZ" Federal Com
Well: #2H.
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #2H
TVD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
MD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
7,950.0	5.80	272.79	7,949.9	4,606.9	0.1	-2.4	2.4	12.00	574,115.24	635,007.09
7,975.0	8.80	272.79	7,974.7	4,631.7	0.3	-5.6	5.6	12.00	574,115.39	635,003.92
8,000.0	11.80	272.79	7,999.3	4,656.3	0.5	-10.1	10.1	12.00	574,115.61	634,999.46
8,025.0	14.80	272.79	8,023.6	4,680.6	0.8	-15.8	15.8	12.00	574,115.89	634,993.72
8,050.0	17.80	272.79	8,047.6	4,704.6	1.1	-22.8	22.8	12.00	574,116.23	634,986.71
8,075.0	20.80	272.79	8,071.2	4,728.2	1.5	-31.1	31.1	12.00	574,116.63	634,978.46
8,100.0	23.80	272.79	8,094.3	4,751.3	2.0	-40.5	40.6	12.00	574,117.09	634,968.99
8,125.0	26.80	272.79	8,116.9	4,773.9	2.5	-51.2	51.3	12.00	574,117.61	634,958.32
8,150.0	29.80	272.79	8,139.0	4,796.0	3.1	-63.0	63.1	12.00	574,118.19	634,946.49
8,175.0	32.80	272.79	8,160.3	4,817.3	3.7	-76.0	76.1	12.00	574,118.82	634,933.52
8,200.0	35.80	272.79	8,181.0	4,838.0	4.4	-90.1	90.2	12.00	574,119.51	634,919.45
8,225.0	38.80	272.79	8,200.9	4,857.9	5.1	-105.2	105.3	12.00	574,120.24	634,904.32
8,250.0	41.80	272.79	8,219.9	4,876.9	5.9	-121.4	121.5	12.00	574,121.03	634,888.17
8,275.0	44.80	272.79	8,238.1	4,895.1	6.7	-138.5	138.6	12.00	574,121.86	634,871.05
8,300.0	47.80	272.79	8,255.4	4,912.4	7.6	-156.5	156.7	12.00	574,122.74	634,853.00
8,325.0	50.80	272.79	8,271.7	4,928.7	8.5	-175.5	175.7	12.00	574,123.66	634,834.07
8,350.0	53.80	272.79	8,287.0	4,944.0	9.5	-195.2	195.4	12.00	574,124.62	634,814.32
8,375.0	56.80	272.79	8,301.2	4,958.2	10.5	-215.7	216.0	12.00	574,125.62	634,793.79
8,400.0	59.80	272.79	8,314.3	4,971.3	11.5	-237.0	237.3	12.00	574,126.66	634,772.55
8,425.0	62.80	272.79	8,326.3	4,983.3	12.6	-258.9	259.2	12.00	574,127.72	634,750.65
8,450.0	65.80	272.79	8,337.2	4,994.2	13.7	-281.4	281.7	12.00	574,128.82	634,728.15
8,475.0	68.80	272.79	8,346.8	5,003.8	14.8	-304.4	304.8	12.00	574,129.94	634,705.12
8,500.0	71.80	272.79	8,355.3	5,012.3	16.0	-327.9	328.3	12.00	574,131.08	634,681.62
8,525.0	74.80	272.79	8,362.5	5,019.5	17.1	-351.8	352.2	12.00	574,132.25	634,657.70
8,550.0	77.80	272.79	8,368.4	5,025.4	18.3	-376.1	376.5	12.00	574,133.43	634,633.45
8,575.0	80.80	272.79	8,373.0	5,030.0	19.5	-400.6	401.1	12.00	574,134.62	634,608.91
8,600.0	83.80	272.79	8,376.4	5,033.4	20.7	-425.4	425.9	12.00	574,135.82	634,584.17



Pathfinder

PathfinderX & Y Report



A Schlumberger Company

Company: Yates Petroleum Corp
 Project: Eddy County (NAD 83)
 Site: Zia "AHZ" Federal Com
 Well: #2H
 Wellbore: OH
 Design: Plan #2

Local Co-ordinate Reference: Well #2H
 TVD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
 MD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,625.0	86.80	272.79	8,378.4	5,035.4	21.9	-450.2	450.8	12.00	574,137.04	634,559.29
8,650.0	89.80	272.79	8,379.2	5,036.2	23.1	-475.2	475.8	12.00	574,138.25	634,534.33
8,665.7	91.68	272.79	8,379.0	5,036.0	23.9	-490.9	491.5	12.00	574,139.01	634,518.63
8,700.0	91.68	272.79	8,378.0	5,035.0	25.6	-525.1	525.7	0.00	574,140.68	634,484.41
8,800.0	91.68	272.79	8,375.0	5,032.0	30.4	-625.0	625.7	0.00	574,145.54	634,384.57
8,900.0	91.68	272.79	8,372.1	5,029.1	35.3	-724.8	725.7	0.00	574,150.40	634,284.73
9,000.0	91.68	272.79	8,369.1	5,026.1	40.1	-824.6	825.6	0.00	574,155.26	634,184.89
9,100.0	91.68	272.79	8,366.2	5,023.2	45.0	-924.5	925.6	0.00	574,160.12	634,085.05
9,200.0	91.68	272.79	8,363.3	5,020.3	49.9	-1,024.3	1,025.5	0.00	574,164.98	633,985.21
9,300.0	91.68	272.79	8,360.3	5,017.3	54.7	-1,124.2	1,125.5	0.00	574,169.84	633,885.37
9,400.0	91.68	272.79	8,357.4	5,014.4	59.6	-1,224.0	1,225.4	0.00	574,174.69	633,785.53
9,500.0	91.68	272.79	8,354.5	5,011.5	64.4	-1,323.8	1,325.4	0.00	574,179.55	633,685.70
9,600.0	91.68	272.79	8,351.5	5,008.5	69.3	-1,423.7	1,425.4	0.00	574,184.41	633,585.86
9,700.0	91.68	272.79	8,348.6	5,005.6	74.2	-1,523.5	1,525.3	0.00	574,189.27	633,486.02
9,800.0	91.68	272.79	8,345.7	5,002.7	79.0	-1,623.4	1,625.3	0.00	574,194.13	633,386.18
9,900.0	91.68	272.79	8,342.7	4,999.7	83.9	-1,723.2	1,725.2	0.00	574,198.99	633,286.34
10,000.0	91.68	272.79	8,339.8	4,996.8	88.7	-1,823.0	1,825.2	0.00	574,203.85	633,186.50
10,100.0	91.68	272.79	8,336.8	4,993.8	93.6	-1,922.9	1,925.1	0.00	574,208.71	633,086.66
10,200.0	91.68	272.79	8,333.9	4,990.9	98.4	-2,022.7	2,025.1	0.00	574,213.57	632,986.83
10,300.0	91.68	272.79	8,331.0	4,988.0	103.3	-2,122.5	2,125.1	0.00	574,218.43	632,886.99
10,400.0	91.68	272.79	8,328.0	4,985.0	108.2	-2,222.4	2,225.0	0.00	574,223.29	632,787.15
10,500.0	91.68	272.79	8,325.1	4,982.1	113.0	-2,322.2	2,325.0	0.00	574,228.15	632,687.31
10,600.0	91.68	272.79	8,322.2	4,979.2	117.9	-2,422.1	2,424.9	0.00	574,233.01	632,587.47
10,700.0	91.68	272.79	8,319.2	4,976.2	122.7	-2,521.9	2,524.9	0.00	574,237.87	632,487.63
10,800.0	91.68	272.79	8,316.3	4,973.3	127.6	-2,621.7	2,624.8	0.00	574,242.72	632,387.79
10,900.0	91.68	272.79	8,313.4	4,970.4	132.5	-2,721.6	2,724.8	0.00	574,247.58	632,287.95
11,000.0	91.68	272.79	8,310.4	4,967.4	137.3	-2,821.4	2,824.8	0.00	574,252.44	632,188.12



Pathfinder
PathfinderX & Y Report

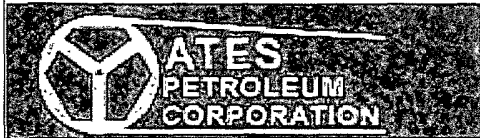
PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Eddy County (NAD 83)
Site: Zia "AHZ" Federal Com
Well: #2H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #2H
TVD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
MD Reference: KB = 18 @ 3343.0usft (Silver Oak 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
11,100.0	91.68	272.79	8,307.5	4,964.5	142.2	-2,921.3	2,924.7	0.00	574,257.30	632,088.28	
11,200.0	91.68	272.79	8,304.5	4,961.5	147.0	-3,021.1	3,024.7	0.00	574,262.16	631,988.44	
11,300.0	91.68	272.79	8,301.6	4,958.6	151.9	-3,120.9	3,124.6	0.00	574,267.02	631,888.60	
11,400.0	91.68	272.79	8,298.7	4,955.7	156.8	-3,220.8	3,224.6	0.00	574,271.88	631,788.76	
11,500.0	91.68	272.79	8,295.7	4,952.7	161.6	-3,320.6	3,324.5	0.00	574,276.74	631,688.92	
11,600.0	91.68	272.79	8,292.8	4,949.8	166.5	-3,420.4	3,424.5	0.00	574,281.60	631,589.08	
11,700.0	91.68	272.79	8,289.9	4,946.9	171.3	-3,520.3	3,524.5	0.00	574,286.46	631,489.24	
11,800.0	91.68	272.79	8,286.9	4,943.9	176.2	-3,620.1	3,624.4	0.00	574,291.32	631,389.41	
11,900.0	91.68	272.79	8,284.0	4,941.0	181.1	-3,720.0	3,724.4	0.00	574,296.18	631,289.57	
12,000.0	91.68	272.79	8,281.1	4,938.1	185.9	-3,819.8	3,824.3	0.00	574,301.04	631,189.73	
12,100.0	91.68	272.79	8,278.1	4,935.1	190.8	-3,919.6	3,924.3	0.00	574,305.89	631,089.89	
12,200.0	91.68	272.79	8,275.2	4,932.2	195.6	-4,019.5	4,024.2	0.00	574,310.75	630,990.05	
12,300.0	91.68	272.79	8,272.2	4,929.2	200.5	-4,119.3	4,124.2	0.00	574,315.61	630,890.21	
12,400.0	91.68	272.79	8,269.3	4,926.3	205.4	-4,219.2	4,224.2	0.00	574,320.47	630,790.37	
12,500.0	91.68	272.79	8,266.4	4,923.4	210.2	-4,319.0	4,324.1	0.00	574,325.33	630,690.54	
12,600.0	91.68	272.79	8,263.4	4,920.4	215.1	-4,418.8	4,424.1	0.00	574,330.19	630,590.70	
12,700.0	91.68	272.79	8,260.5	4,917.5	219.9	-4,518.7	4,524.0	0.00	574,335.05	630,490.86	
12,800.0	91.68	272.79	8,257.6	4,914.6	224.8	-4,618.5	4,624.0	0.00	574,339.91	630,391.02	
12,900.0	91.68	272.79	8,254.6	4,911.6	229.6	-4,718.4	4,723.9	0.00	574,344.77	630,291.18	
12,921.2	91.68	272.79	8,254.0	4,911.0	230.7	-4,739.5	4,745.1	0.00	574,345.80	630,270.00	

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County (NAD 83)
Site: Zia "AHZ" Federal Com
Well: #2H
Wellbore: OH
Plan: Plan #2

PROJECT DETAILS: Eddy County (NAD 83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

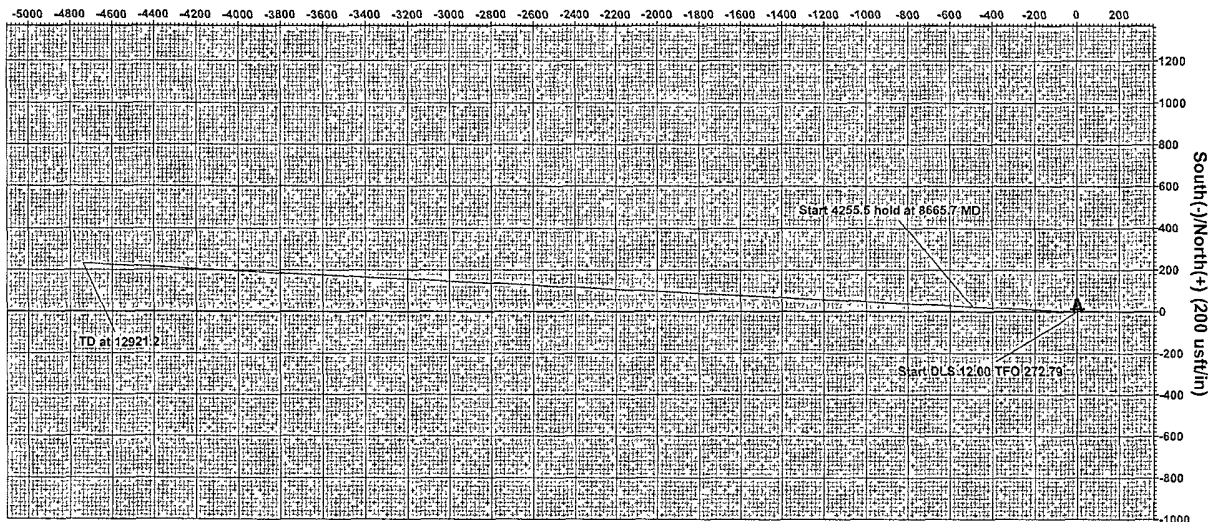
PATHFINDER®
A Schlumberger Company

WELL DETAILS: #2H

Ground Elevation: 3325.0
RKB Elevation: KB = 18 @ 3343.0usft (Silver Oak 10)
Rig Name: Silver Oak 10

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 0	0 0	574115.121	635009.532	32° 34' 40.544 N	104° 1' 45.233 W	

West(-)/East(+) (200 usft/in)



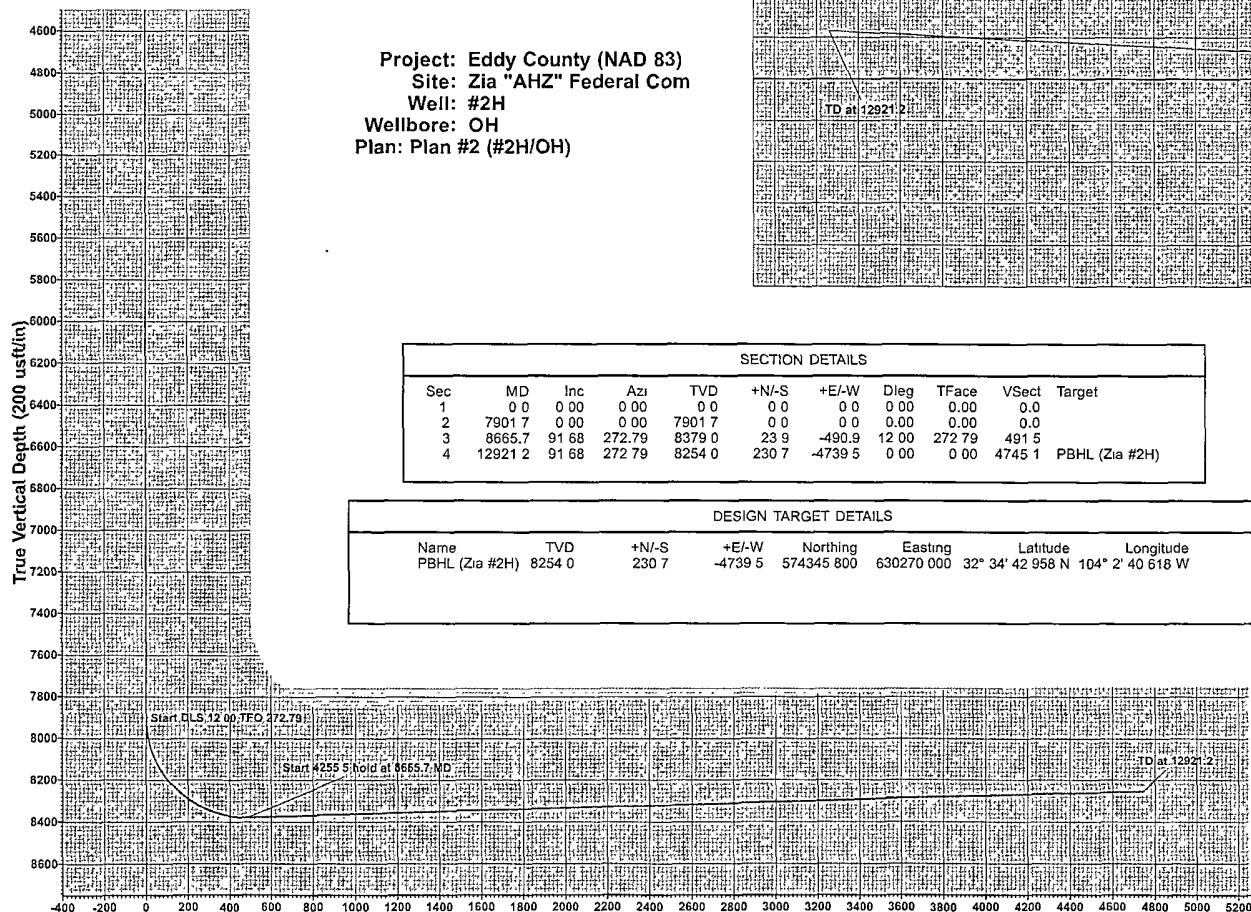
Project: Eddy County (NAD 83)
Site: Zia "AHZ" Federal Com
Well: #2H
Wellbore: OH
Plan: Plan #2 (#2H/OH)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target
1	0 0	0 00	0 00	0 0	0 0	0 0	0 00	0.00	0.0	
2	7901 7	0 00	0 00	7901 7	0 0	0 0	0.00	0.00	0.0	
3	8665 7	91 68	272.79	8379 0	23 9	-490.9	12 00	272 79	491 5	
4	12921 2	91 68	272 79	8254 0	230 7	-4739 5	0 00	0 00	4745 1	PBHL (Zia #2H)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (Zia #2H)	8254 0	230 7	-4739 5	574345 800	630270 000	32° 34' 42 958 N	104° 2' 40 618 W



Vertical Section at 272.79° (200 usft/in)



Azimuths to Grid North
True North -0.16°
Magnetic North: 7.57°

Magnetic Field
Strength: 48757 2snT
Dip Angle: 60.45°
Date: 1/25/2012
Model: IGRF200510

Plan Plan #2 (#2H/OH)

Created By: Sam Biffle Date: 10/30/2012

Checked: _____ Date: _____

ATES Petroleum Corp
Eddy County (NAD 83)
Zia "AHZ" Federal Com
Well: #2H
Plan #2